

## APPENDIX B

WSP Review and Approval Documents

Such as

Consistency Review Approvals,

DOH: Pre-Plan Meeting documents, WSP comments & responses

Public meeting notes

Lewis County Resolutions/Approvals





STATE OF WASHINGTON  
DEPARTMENT OF HEALTH  
SOUTHWEST DRINKING WATER REGIONAL OPERATIONS  
PO Box 47823, Olympia, Washington 98504-7823  
TDD Relay 1-800-833-6388

February 11, 2016

Shirley Kook  
Acting Utility Services Manager  
2025 Northeast Kresky Avenue  
Chehalis, Washington 98532

Subject: Vader – Enchanted Valley Water System, ID #90900E, Lewis County; Water System Plan, ODW Project #15-1106

Dear Ms. Kook:

Thank you for submitting the Water System Plan (WSP) for the above water system, received by the Office of Drinking Water (ODW) on November 13, 2015. We have reviewed the WSP in accordance with the pre-plan checklist, developed on December 3, 2013, and have the following comments that need to be addressed before ODW can approve the WSP update:


#### Chapter 1 – Water System Description

1. Page 18 and Figures 1-1 and 2-1, Retail Service Area (RSA). The text does describe the existing, retail, and future service areas; however, the maps only show the Water Service Area. In addition, the text refers to existing and future RSAs. **Please eliminate reference to future RSAs and use the standard terms of Retail Service Area, Existing Service Area, and Future Service Area. Also, the WSP needs to show the Existing Service Area, Retail Service Area, and Future Service Area as well as the Water Rights Place of Use. Please show all of these areas and label them accordingly, on one map or separate maps.** Please see the enclosed fact sheet called "Municipal Water Suppliers Service Areas in Planning Documents" (DOH Publication #331-432).
2. Figure 1-1, Service Area Map. **The map needs to include all of the Enchanted Valley service area.**

#### Chapter 2 – Description

3. Page 27. The Alum and Soda pumps are rated for 108 gallons per day (gpd), not gallons per minute (gpm) as shown. In addition, the polymer feed pump is rated for 60 gpd. **Revise Table 2.2, check remaining items on that list for consistency with the water diagrams and specifications from treatment plant reports.** We can provide you with copies of the reports we have upon request.
4. Page 26 and 27. The report states that flows over 100 gpm from the booster pump station (BPS) may compromise the AC water line, but the next page states that the water main was replaced with HDPE and the AC line is isolated. It is unclear whether this is a leftover statement from the older WSP, or if the old AC line is still in use and incapable of delivering higher flows. **Please clarify whether the line has been replaced and specify the actual flow rate.** If the flow is reduced, the actual performance value should be used in the limiting factor analysis, not the theoretical performance value. If the old AC pipe is the limiting factor, it should be listed on the capital improvement plan (CIP) to be replaced as soon as possible.

#### Chapter 3 – Planning Data and Demand

5. Page 39-41. The estimated system demands are not consistent with the data. The base 2014 demands for average day demand (ADD) and maximum day demand (MDD) in 2014 are reported in Table 3.14 as 54,232 gpd and 

75,925 gpd respectively; however, the dataset on page 36 shows that these values should be 80,420 gpd for ADD and 126,200 gpd for MDD. This appears to be the result of either neglecting or under-estimating the impact of leakage. **Please revise the analysis so that projections match the data set, and re-evaluate peak hourly demand (PHD) with the revised MDD.**

6. Table 3.11 shows the non-revenue water increased drastically from 2012 to 2014 and almost doubled between 2013 and 2014. **Please explain the large increase in non-revenue water.**

#### Chapter 4 – System Analysis

7. Page 43 conflicts with page 26. Page 26 states that there are two pumps, with one pump the capacity is 100 gpm, with both pumps the capacity is expected to be 185 gpm; however, this flow has not been tested due to concern about AC pipes. Page 43 overlooks this, and states that the capacity is 100 gpm each pump, and that the total capacity is 200 gpm. Finally, during the sanitary survey performed in March 2015, the plant was noted to operate at 140 gpm. **Please confirm and revise these flows to be consistent and accurate with the actual capacity.** This conflict is also found in Table 4.5, pages 44, 47 and 48, and could be elsewhere in the WSP.
8. Pages 48 to 50 and Table 4.7. Upon re-evaluation of the PHD based on the MDD (see comment 5), and using the actual plant output determined (see comment 7), please revise the calculations for reservoir storage. **Please confirm that equalization storage is calculated using the actual plant operating conditions.**
9. Page 53 states that fire flows were determined from WAC 246-293-640. WAC 246-293-640 only sets minimum standards to be used in the absence of other information. Generally, local fire officials will determine actual requirements based upon local fire codes. Actual requirements will typically vary depending on housing density, planned use, occupancy, construction and other factors. **Consult the City ordinances and with the local fire marshal for guidance with respect to fire flow and requirements, hydrant spacing etc., or document that none is available for this area.**
10. Page 54, Summary of System Capacities. **The WSP needs to include information listed on Worksheet 6-1 and Table 6-1 of the Water System Design Manual (WSDM) showing the actual capacity of each element of the water system in Equivalent Residential Units (ERUs) and listing the limiting water system component. See the enclosed Worksheet 6-1 and Table 6-1. The total number of existing ERUs needs to be calculated by customer class, including a class for distribution system leakage (DSL) and non-revenue water.**

#### Chapter 7 – Source Water Protection

11. Page 69, Source Water Protection. The second paragraph should be modified to say that the LOW vulnerability rating by ODW is only with regard to Synthetic Organic Compounds (SOCs) since there is a low use of SOCs in Lewis County. The water shed is MODERATELY vulnerable to Volatile Organic Compounds (VOCs). However, due to the abundance of roads and railroads within the water shed and in close proximity to the Cowlitz River, it would appear that the water shed should be rated as HIGH for vulnerability to potential contamination. The stated ratings by ODW are only for VOCs and SOCs and not for all potential contaminants.

#### Chapter 8 – Operation and Maintenance

12. Page 80, Section 8.4.1, Contingency Plan. The WSP refers to the Standard Operating Procedures (SOP) Manual. **Please provide ODW with a copy of this manual.**
13. Page 81, Table 8.3, Emergency Roster. **Please change the ODW Regional Engineer phone number to (360) 236-3030. This is our main office number and will be answered at the front desk during normal business hours. The front desk will transfer to the Regional Engineer for Lewis County, if available; otherwise, the call will be routed to another available Regional Engineer.**
14. Page 83, Section 8.4.2, Vulnerability Assessment. Most elements of the emergency response plan should have language added to indicate that ODW be contacted. For example, debris flow, dam failure, flooding, earthquake, snowstorm, windstorms, vandalism, and contamination all warrant contacting ODW at a minimum to keep us apprised of the situation.

15. Page 88, Section 8.5.3, Program Elements. The Cross Connection Control Program (13.30.150 LCC) is missing from the code in the appendix. **Please provide this section.**
16. Page 92, Table 8.5, Some items do not match ODW Publication #331-431 (chemical analysis, monitoring plans, record of action to correct violations, and possibly other items). **Please align Table 8.5 with the enclosed ODW Publication #331-431.**

#### **Chapter 11 -- Financial Program**

17. Page 105, Table 11.1, Summary of Five-Year Financial History. **Please explain the differences in tabulating Total Revenue.** For example, in 2014 only the Beginning Balance and Water Sales were added together to list Total Revenue.  
  
Debt Service for 2014 lists 36,642, but then jumps to 57,802 for 2015. Please explain this increase. Also, please provide an amortization schedule for the debt and annual debt service payments through the life of the loans.
18. Page 110, Table 11.3, Projected 6-Year Financial Plan. **Please explain the increase in water sales revenue from 2017 to 2018 and beyond, the CIP Rate Revenue, why the CIP projects are not included in the budget, and how the CIP will be funded.**

#### **Appendix A**

19. The Water Facilities Inventory (WFI) form needs to be updated to the current number of connections as listed on page 37 at 344 residential connections and it needs to be signed and dated.

#### **Appendix B**

20. Please provide copies of the public meeting notes and the Lewis County Resolution approving the WSP. Also, please include in the Appendix or WSP a copy of the Notice for Water Use Efficiency (WUE) Goal setting public forum and minutes from the public forum, a copy of the notice of the meeting of the consumers and minutes from that meeting, and a copy of the notice of the public hearing on the adoption of the WSP.

#### **Appendix E**

21. The Water Loss Control Action Plan (WLCAP) needs to be updated as it pre-dates the transfer of ownership of the water system to Lewis County. As set out in WAC 246-290-820(4) the WLCAP needs to include control methods necessary to achieve less than ten (10) percent leakage standard, an implementation schedule, and a budget that demonstrates how control methods will be funded. The County has made great strides in reducing DSL. However, many of the control methods listed in the WLCAP have been completed and the DSL is near 20 percent. Additional methods of control need to be listed in the WLCAP.

#### **Appendix F**

22. The Coliform Monitoring Plan (CMP) needs some slight modifications and it would be helpful to use the current template, which is enclosed and available on the ODW website at [http://www.doh.wa.gov/Documents/Pubs/331-036\\_template.doc](http://www.doh.wa.gov/Documents/Pubs/331-036_template.doc).

There are four routine sites listed: X1 through X4. The CMP lists four repeat sites. However, one of the repeat sites must be the original coliform-present site. Please clearly show that for each routine site, that same site is also re-tested with the repeat sample set.

The various routine sample sites and repeat sample sites are not labeled on the map. Please label each sample site.

#### Appendix J

23. The plans for the blow-off, air-vac, and below ground double check valves specify below grade equipment. All below grade equipment must be adequately drained to prevent submersion during heavy rains. Only the Double Check Detector Assembly drawing refers to drainage. This equipment should either be drained to daylight, or when that cannot be achieved, be installed above ground. **Please revise.**

#### Appendix K:

24. Distribution improvements estimate states that 8-inch PVC water main will be used, but standards state that 8-inch water mains shall be DI with cement coating. In other places, it is noted that HDPE is used (in the replaced water main from the intake). **Please clarify where PVC, HDPE, and DI are planned; also include specifications and installation standards for the PVC and HDPE line.**

#### Miscellaneous

25. **Please provide correspondence with any adjacent utilities and each local government with jurisdiction in order to assess consistency with ongoing and adopted planning efforts. See WAC 246-290-100(7).**

#### DEPARTMENT OF ECOLOGY

On November 23, 2015, a copy of this WSP was sent to the Department of Ecology (Ecology). Ecology has not issued comments on this WSP.

*The Department's review of your WSP and design does not confer or guarantee any right to a specific quantity of water. Our review is based on your representation of available water quantity. If the Washington Department of Ecology, a local planning agency, or other authority responsible for determining water rights and water system adequacy determines that you have use of less water than you represent, the number of approved connections may be reduced commensurate with the actual amount of water and your legal right to use it.*

We ask that you submit three copies of the revised pages of the WSP. Please respond to all comments in the plan. To expedite the review of the revised WSP, please summarize the response to the comments and where each response is located (for example, page numbers, appendices, and so on).

We recognize the significant effort and resource commitment involved in the preparation of this WSP. Thank you for your cooperation.

Regulations establishing a schedule of fees for review of planning, engineering, and construction documents were adopted April 30, 2012 (WAC 246-290-990). An invoice for \$1,206 is enclosed.

If you have any questions, please contact Mark Mazeski at (360) 236-3038 or Jester Purtteman at (360) 236-3036.

Sincerely,



Mark J. Mazeski  
Office of Drinking Water, Regional Planner



Jester Purtteman, P.E.  
Office of Drinking Water, Regional Engineer

Enclosures

cc: Lewis County Health Department  
Lewis County Planning Department  
Tammy Hall, Department of Ecology



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**om:** Mazeski, Mark J (DOH) <Mark.Mazeski@DOH.WA.GOV>  
**Sent:** Wednesday, November 12, 2014 1:40 PM  
**To:** Shirley Kook  
**Cc:** Cherry, Janet G (DOH)  
**Subject:** RE: City of Vader Pre-Plan Meeting

Thank you Shirley, I will update our files accordingly - Mark

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**From:** Shirley Kook [mailto:Shirley.Kook@lewiscountywa.gov]  
**Sent:** Wednesday, November 12, 2014 12:50 PM  
**To:** Mazeski, Mark J (DOH)  
**Cc:** Cherry, Janet G (DOH)  
**Subject:** RE: City of Vader Pre-Plan Meeting

We anticipate the new submittal date to be in July 2015 because we want to use the 2014 data in the new WSP.

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**From:** Mazeski, Mark J (DOH) [mailto:Mark.Mazeski@DOH.WA.GOV]  
**Sent:** Thursday, September 25, 2014 3:19 PM  
**To:** Shirley Kook  
**Cc:** Cherry, Janet G (DOH)  
**Subject:** FW: City of Vader Pre-Plan Meeting

Hi Shirley,

Thank you for the phone call. I found where we had said 2013 data would be good data to use. Please see #5 below.

I just spoke with Janet and she said that it would be acceptable to use 2013 data for your ERU calculations as well. The 2013 data is more reflective of current conditions of your water system since you have been actively fixing leaks. Janet was pleased to hear that you plan to incorporate 2014 data as well.

As we discussed your current proposed submission date for your plan update was November 1, 2014. Since you want to include 2014 data in your plan update, and we agree that that is a good idea, we realize that your plan update will not be submitted until sometime in 2014. Please provide me with your new planned submittal date.

Thank you,  
Mark

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**From:** Mazeski, Mark J (DOH)  
**Sent:** Friday, December 20, 2013 2:25 PM  
**To:** [Tim.elsea@lewiscountywa.gov](mailto:Tim.elsea@lewiscountywa.gov); [Shirley.kook@lewiscountywa.gov](mailto:Shirley.kook@lewiscountywa.gov)  
**Cc:** Hayes, Corina M (DOH); Cherry, Janet G (DOH)  
**Subject:** City of Vader Pre-Plan Meeting

Dear Tim and Shirley,

Thank you for taking the time to meet with Janet, Corina and me on December 3, 2013 to discuss the Vader Water system Plan. As we discussed in the preplan, the plan should address all elements identified on the preplan checklist (attached). The plan should build on previous planning documents and clearly identify how the County intends to own,

operate and manage the system in a long term viable manner. As agreed upon during the preplan the plan should be submitted on or before November 1, 2014. Please contact me if you have problems meeting this submittal date.

Although this should be a comprehensive water system plan, please be sure to include the specific information below.

1. The service area map needs to include the existing, retail, and future service areas and identify your water rights place of use. These areas may be shown on a single map with each area clearly labeled or on separate maps.
2. As we discussed at the pre-plan meeting, the Plan itself does not have regulatory authority for such things as Cross Connection Control, shutting off water, establishing water rates, and water system design standards. Please provide or reference these ordinances or resolutions in the Plan.
3. Please review all Service area Policies to be sure that they meet County and City needs. For example, how are additional connections going to be allocated between those areas within City limits and those areas outside? Is the City interested in obtaining waivers of right to remonstrate to annexation from those new connections outside of City limits that do receive new water connections?
4. The Water Use Efficiency section needs to reflect the current requirements. Please summarize any past conservation efforts and develop a Water Loss Action Plan. Adopt goals and measures and provide documentation of goal adoption through a public process.
5. It was agreed that for the purposes of calculating system capacity, that the Water Loss data for 2013 could be used instead of using the average for the past 3 years. It was agreed that significant improvements have been put in place to permanently reduce water loss to the 2013 level. Raw water pumping rates should not assume more than 18 hours of operation in any 24 hour day.
6. We recommend that the County consider updating the hydraulic model.
7. How are fire flow standards going to be established in the water system service area? Please have the County Fire Marshal weigh in on issues regarding fire flow requirements and whether nesting will be allowed? Also include policies for new development on undersized water lines.
8. Review the current water system policies and determine if they still meet the needs of the system and the County. Also ensure the policies are in compliance with municipal water law requirements and address the system's duty to serve within their retail service area. (Describe how you will determine if you can provide services to new customers. What is your process for evaluating the system?)
9. Any agreements that have an impact on the water system should be included or referenced in the plan.
10. The WSP must include two Local Government Checklists (LGCs). One from the Planning and Zoning authority for the City of Vader and one from Lewis County. It was mentioned that the same person fulfils both of these functions. However, the WSP must include one LGC from each entity.
11. The plan should include a more detailed Watershed control plan that proposes efforts the County can take to provide additional protection to the watershed, especially for those areas below the Tacoma Power Dam to the water system intake.
12. The plan should discuss any Standard Operating Procedures the County has or intends to put into place to address operational concerns.

We also discussed the topic of an ordinance to limit individual property owners from drilling their own well instead of hooking up to the Vader water system? This is not a requirement but may be of interest to the County. Please see the

attached Pacific County Ordinance as an example:

<http://www.co.pacific.wa.us/ordres/BOH%20Ordinance%20No%20%208%20Adopted%20Jan%2011%202011.pdf>

Please let me know if you have any questions. Feel free to call or e-mail me, if you have questions while you are working on the plan.

Thank you again,

*Mark*

Mark J. Mazeski, Regional Planner  
Washington State Department of Health  
Office of Drinking Water, Southwest Regional Office  
Phone: (360) 236-3038 Email: [mark.mazeski@doh.wa.gov](mailto:mark.mazeski@doh.wa.gov)  
243 Israel Road S.E., Tumwater, WA 98501  
P.O. Box 47823 (MS: 47823), Olympia, WA 98504  
Web site: [www.doh.wa.gov/ehp/dw](http://www.doh.wa.gov/ehp/dw)

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Department of Health, Office of Drinking Water  
Southwest Drinking Water Operations  
Pre-Plan meeting

Water System: City of Vader

Date: Pre-Plan - December 3, 2013

Water System Plan Expiration Date: October 27, 2014

Operating Permit Color: Green

Water System Plan Submittal Date: November 1, 2014

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The purpose of this Pre-Plan is to:

1. Determine the scope and level of detail of the WSP plan.
2. Establish a schedule for submittal of the WSP plan.

**Water System Plan Format:**

The following sections refer to information that needs to be included in the WSP and provides a proposed outline. You may choose a different format, but all of the elements identified below must be included.

**Water System Plan (WSP) Checklist**

<i>Required</i>	<i>Content Description</i>	<i>WSP Page #</i>
<b>Chapter 1</b>	<b>Description of Water System</b>	
(√)	Updated WFI, signed and dated	_____
(√)	Ownership and management <i>Please provide an overview of the County's management structure.</i>	_____ _____
(√)	System history and background <i>Existing history in "08" and "10" plans plus discussion on the process by which the County took over operations. Include explanation of taking over and incorporating the Enchanted Valley County Club system into the City's system. (This should not be a big focus of the Planning effort.)</i>	_____
(√)	Inventory of existing facilities <i>Please include all of the recent changes that have occurred since the last plan.</i>	_____
(√)	Description of and discussion about related plans: groundwater management, basin (WRIA), and City/County land use plans & zoning. <i>The 2010 Plan Amendment has very good zoning mapping.</i>	_____
(√)	<b>Service Area Maps: clearly identifying existing, retail and future service areas. This is often missing from first submissions, but is a very important element of a WSP. These maps or map should clearly show the existing, retail, and future service areas and water rights place of use. This can be depicted on one map if properly labeled.</b>	_____

	( ✓ )	<b>Policies: Service area, conditions of service, annexation</b> <i>What new ordinances and policies did the County adopt for management of the water system?</i> <i>What ordinances apply outside of City Limits/inside of City Limits?</i> <i>Are new connections available to anyone outside of city limits? What are the procedures for obtaining service?</i> <i>Is there a requirement to sign a waiver of right to remonstrate for annexation to the City? How does the County determine that the system has capacity?</i>	_____
	( ✓ )	Duty to serve requirement: procedures, conditions, appeals <i>Discuss the procedures for how the water system will determine that they meet the duty to serve requirement. Also include an appeals process for conflicts that arise out of conflicts over "duty to serve". See Fact Sheet (DOH 331-366).</i>	_____
	( ✓ )	Consistency from local planning agency (LGC checklist) <i>Please obtain two LGC checklists, one each from the City and County Zoning Authorities.</i>	_____
Chapter 2		<b>Planning Data</b>	
	( ✓ )	Demand analysis based on water use <ul style="list-style-type: none"><li>• Include analysis of population, service connections &amp; ERUs</li><li>• Source and service meter data (preferably three or more, typically 6 years). Provide monthly and annual production and consumption totals.</li><li>• Provide usage by customer class. Analyze industrial and commercial demands separate from the residential demand and multifamily structures separate from the single family residences.</li><li>• Define ERU</li><li>• Provide data and assumptions (including DSL) for calculating MDD, PHD and ADD</li><li>• Demand analysis for the whole system</li></ul>	_____ _____
	( ✓ )	Provide 6 & 20 year projections for population, service connections, & ERUs <ul style="list-style-type: none"><li>• Provide 6 &amp; 20 year projections for demand forecasts with and without expected efficiency savings (conservation)</li></ul>	_____ _____
	( ✓ )	Provide 6 & 20 year projections for land use and zoning	_____
	( ✓ )	Distribution System Leakage percentage and volume	_____
Chapter 3		<b>System Analysis</b>	
	( ✓ )	Provide assumptions and basis of analysis <ul style="list-style-type: none"><li>• System design standards</li><li>• Policies on operations and expected level of service (such as standby storage, pumping restrictions and emergency back-up power)</li><li>• Fire flow requirements and if nesting is allowed. May need a confirmation from the local fire authority.</li></ul> <i>Who provides Fire protection in the City limits of Vader/outside of City limits? What happens with sub-standard lines with regard to fire flow?</i>	_____

	( √ )	System inventory and description <i>Probably fairly complete. Just need to update with recent improvements and remove description of intertie with EVCC.</i>	_____
	( √ )	Capacity analysis (legal and physical capacity) <ul style="list-style-type: none"> <li>• Limiting factor analysis (WSDM worksheet 6-1)</li> <li>• Analysis per pressure zone and the whole system</li> <li>• <b>Water rights analysis- include water right self-assessment forms for existing, 6 &amp; 20-year projections, including copies of water right certificate(s)</b></li> <li>• consider source, pumping, treatment, storage, and distribution</li> </ul>	_____ _____ _____ _____
	( √ )	Hydraulic analysis of distribution system. <i>This likely needs to be updated from old plans.</i> <ul style="list-style-type: none"> <li>• Describe the model used</li> <li>• Evaluate the system based on PHD and MDD + Fire flow</li> <li>• Evaluate the current conditions, and 6- and 20-year planning periods</li> <li>• Check minimum pressures and maximum velocities</li> <li>• Include assumptions of model, pressure zone boundary conditions, and a summary of model input information. Storage assumptions should be based on minimum reservoir levels.</li> <li>• Include verification and calibration methods and results.</li> <li>• Summary of system deficiencies</li> </ul>	_____ _____ _____ _____ _____ _____ _____
Chapter 4	( √ )	Analysis of possible improvement projects <b>Water Use Efficiency Program</b> <i>This chapter will require changing to follow the WUE program as opposed to the old Conservation Program in past plans.</i>	_____ _____
	( √ )	Water Use Efficiency (WUE) Program per WAC 246-290-810 <ul style="list-style-type: none"> <li>• Describe the current WUE program</li> <li>• Describe WUE goal &amp; document public adoption process <i>You can use DOH website for public meeting publication. There is a link on the DOH WUE webpage.</i> <a href="http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/WaterSystemDesignandPlanning/WaterUseEfficiency.aspx">http://www.doh.wa.gov/CommunityandEnvironment/DrinkingWater/WaterSystemDesignandPlanning/WaterUseEfficiency.aspx</a> <i>Please provide copies of public notices and meeting minutes. Please provide direct notice to customers, for example insert notice in billing statement. This can be a combined public meeting to discuss WSP with customers and discuss WUE.</i></li> <li>• Describe measures that will be implemented to achieve the goal &amp; include schedule &amp; costs in the budget</li> <li>• Describe process used to evaluate the WUE measures you did not implement</li> <li>• Describe yearly consumer education</li> <li>• Estimate projected water savings from selected measures</li> <li>• Describe process that will be used to determine effectiveness of the program</li> </ul>	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____
	( √ )	Source & Service Meters - or schedule w/activities to minimize leakage	_____
	( √ )	Water Loss Action Control Plan WAC 246-290-820	_____



	(√)	Water supply characteristics, description & discussion on effect of water use	_____
	(√)	Source of supply analysis and evaluation of supply alternatives	_____
<b>Chapter 5</b>		<b>Source Water Protection</b>	
	(√)	Analysis and discussion of Water Quality	_____
	(√)	Watershed control program <i>See WAC 246-290-668 Recommendation is to speak with Tacoma Power to get info on high volume releases/turbidity. Primary focus should be on area below the dam to the water system intake. We also recommend that you work with the railroad on emergency response plans.</i>	_____
<b>Chapter 6</b>		<b>Operation and Maintenance Program</b>	
	(√)	Water system management and personnel	_____
	(√)	Operator certification	_____
	(√)	Routine operating procedures and preventive maintenance <i>Please discuss the SOPs. Where does re-lining reservoir fit into the budget?</i>	_____
	(√)	Water quality sampling procedures & program.	_____
	(√)	Coliform monitoring plan, including maps <i>Please use 2013 updated guidance and sample.</i>	_____
	(√)	Emergency response plan <ul style="list-style-type: none"> <li>• Water system contacts <i>This is often provided in a table form which makes it easy to use in cases of emergencies.</i></li> <li>• Vendor Contacts (Equipment replacement, water haulers, etc.)</li> <li>• Example notices (water outages, BWA, coliform MCL, emergency conservation)</li> <li>• Emergency government officials contact info (ODW, TCEH, State and County Emergency Operations Centers)</li> <li>• List of emergency sources and interties</li> <li>• Emergency response planning activities to ensure preparedness</li> </ul>	_____
	(√)	Water shortage plan and service reliability per WAC 246-290-420	_____
	(√)	Cross-connection control program <i>How is this being implemented? How many back flow devices have been installed? Does the County have its own CCC Ordinance or is it using the City's program?</i>	_____
	(√)	Recordkeeping, reporting, and customer complaint program	_____
	(√)	Summary of O&M deficiencies	_____
<b>Chapter 7</b>		<b>Distribution Facilities Design and Construction Standards</b>	
	(√)	<ul style="list-style-type: none"> <li>• Standard construction specification for distribution mains <i>- Does the County intend to use the City's construction standards found in Appendix E of 2008 plan or use County standards?</i></li> </ul>	_____
<b>Chapter 8</b>		<b>Improvement Program</b>	
	(√)	Capital improvement schedule for 6 and 20 years <ul style="list-style-type: none"> <li>• Include inventory and assessment of existing system components <i>Please show an inventory of activity (projects) since last plan. We will want to see an O &amp; M Capital Improvement Plan (CIP) that</i></li> </ul>	_____

*shows projects that need to be done; include turbidity meters at water treatment plant and lining reservoir.*

**Chapter 9**

**Financial Program**

(√)

<1000 connections – Balanced 6-year budget - See WAC 246-290-100(4)(j) set out below

(j) Financial program, including demonstration of financial viability by providing:

(i) A summary of past income and expenses;

(ii) six-year balanced operational budget for systems serving less than one thousand connections;

(iii) A plan for collecting the revenue necessary to maintain cash flow stability and to fund the capital improvement program and emergency improvements; and

(iv) An evaluation that has considered:

(A) The affordability of water rates; and

(B) The feasibility of adopting and implementing a rate structure that encourages water demand efficiency.

**Chapter 10**

**Miscellaneous Documents**

(√)

Meeting of the consumers (may be combined with WUE public meeting).

- Date, agenda, meeting minutes

(√)

County/Adjacent Utility Correspondence

(√)

Agreements: franchise, wheeling, mutual aid, inter-local and other agreements (if any exist)

(√)

Documentation that WSP has been adopted by the Board of County Commissioners.

**Submittal Process**

Here are some items the Office of Drinking Water (ODW) must have with your submittal:

1. A complete Water System Plan Submittal Form, current Water Facilities Inventory Form (WFI) signed and dated along with existing, 6 and 20 year Water Rights Self-Assessment Forms.
2. Three (3) copies of the WSP are required – two for ODW use and one to be routed to the Department of Ecology (Ecology).
  - Three-ring binders are preferable to comb binders as it allows for page revisions to be added in the draft.
  - Tabbed chapters are preferred for ease of review.
3. ODW will complete the WSP review within 90-days from the date of complete submittal.
  - ODW will conduct a detailed review and if necessary, issue a comment letter.
  - If the system is not responsive to our comments, the project can be cancelled and returned to the purveyor.

## Local Government Consistency Review Checklist

Water System Name: VADER-ENCHANTED VALLEY PWS ID: 90900E

Planning/Engineering Document Title: 2015 WSP Plan Date: 5/2015

Local Government with Jurisdiction: LEWIS COUNTY

### WAC 246-290-108 Consistency with local plans and regulations:

Consistency with local plans and regulations applies to planning and engineering documents under WAC 246-290-106, 246-290-107, and 246-290-110(4)(b) (ii).

1) Municipal water suppliers must include a consistency review and supporting documentation in its planning or engineering document describing how it has addressed consistency with **local plans and regulations**. This review must include specific elements of local plans and regulations, as they reasonably relate to water service as determined by Department of Health (DOH). Complete the table below and see instructions on back.

Local Government Consistency Statement	Page(s) in Planning Document	Yes – No – Not Applicable
a) The water system service area is consistent with the adopted <u>land use and zoning</u> within the applicable service area.	18, 31, Figure 3.1	yes
b) The <u>six-year growth projection</u> used to forecast water demand is consistent with the adopted city/county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	32-35	yes
c) Applies to <u>cities and towns that provide water service</u> : All water service area policies of the city or town are consistent with the <u>utility service extension ordinances</u> of the city or town.	MA	N/A
d) <u>Service area policies</u> for new service connections are consistent with the adopted local plans and adopted development regulations of all jurisdictions with authority over the service area [City(ies), County(ies)].	18	yes
e) <u>Other relevant elements</u> related to water supply are addressed in the water system plan, if applicable; Coordinated Water System plans, Regional Wastewater plans, Reclaimed Water plans, Groundwater Area Management plans, and Capital Facilities Element of Comprehensive plans.	19	yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Signature: Karen Witherspoon Date: 5/28/2015  
Printed Name, Title, & Jurisdiction: Karen Witherspoon, Senior Project Planner, Lewis County





## Local Government Consistency Review Checklist

Water System Name: VADER EXHAUSTED VALLEY PWS ID: 90900

Planning/Engineering Document Title: 2015 WSP Plan Date: 5/2015

Local Government with Jurisdiction: CITY OF VADER

### WAC 246-290-108 Consistency with local plans and regulations:

Consistency with local plans and regulations applies to planning and engineering documents under WAC 246-290-106, 246-290-107, and 246-290-110(4)(b) (ii).

1) Municipal water suppliers must include a consistency review and supporting documentation in its planning or engineering document describing how it has addressed consistency with local plans and regulations. This review must include specific elements of local plans and regulations, as they reasonably relate to water service as determined by Department of Health (DOH). Complete the table below and see instructions on back.

Local Government Consistency Statement	Page(s) in Planning Document	Yes - No - Not Applicable
a) The water system service area is consistent with the adopted <u>land use and zoning</u> within the applicable service area.	18, 31, FIG. 3.1	OK
b) The <u>six-year growth projection</u> used to forecast water demand is consistent with the adopted city/county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	32-35	OK
c) Applies to cities and towns that provide water service: All water service area policies of the city or town are consistent with the <u>utility service extension ordinances</u> of the city or town.	N/A	OK
d) <u>Service area policies</u> for new service connections are consistent with the adopted local plans and adopted development regulations of all jurisdictions with authority over the service area [City(ies), County(ies)].	18	OK
e) <u>Other relevant elements</u> related to water supply are addressed in the water system plan, if applicable; Coordinated Water System plans, Regional Wastewater plans, Reclaimed Water plans, Groundwater Area Management plans, and Capital Facilities Element of Comprehensive plans.	19	OK

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Kenneth D. Smith  
Signature

June 22, 2015  
Date

Kenneth D. Smith Mayor, Vader  
Printed Name, Title, & Jurisdiction

**LEWIS COUNTY UTILITY**  
**VADER-ENCHANTED VALLEY WATER SYSTEM**  
**INFORMATION MEETING**

JANUARY 19, 2016

1. INTRODUCTION
2. UTILITY OVERVIEW
3. WATER SYSTEM PLAN
4. NEW TANK

**LEWIS COUNTY UTILITY  
INFORMATION MEETING ABOUT THE  
VADER-ENCHANTED VALLEY WATER SYSTEM  
JANUARY 19, 2016**

**SIGN-IN SHEET**

<u>NAME</u>	<u>ADDRESS</u>	<u>PHONE NO./EMAIL</u>
STEVE KROHN	720 MAIN ST	295-3749
Dan Schottman	1332 Firgrove Rd	295-0838
Scott Stevens	155 Firgrove	295-3885
Linda Smith		295 4002
Andy Wilson	418 MAIN ST	295-3811
Judi Costello	709 A ST	295-3036
Tim Elsea	LCPW	
Shirley Kook	LCPW, Engineering	
John Strom	LCPW, Utility Operator, Area 3	
Fred Terry	LCPW, Area 3 Rd Supervisor	



## CRIME STOPPERS

Crime Stoppers of Lewis County and the Lewis County Sheriff's Office are seeking your assistance with a theft investigation which occurred in the 500 block of Silverbrook Road, in Randle. On December 16th around 6PM, suspect(s) stole a chainsaw from the back of a pickup parked at the school.

- Stihl MS661C Chainsaw, with double guards
- 2 gas cans
- 2 propane tanks
- Push lawn mower
- Miscellaneous household items

Total loss amount estimated at \$1,000

They are also seeking your assistance with a burglary investigation which occurred in the 2800 block of Harrison Ave. in Centralia. On December 8th around 11:29PM suspect(s) made forcible entry by breaking a window into a business, stole a \$100 bill, and caused damage to the building.

Total loss amount estimated at \$1,000

Your assistance is also needed in a burglary investigation

## ROSSETTI

Continued from page 1

to save the seeds, how to pick the fruits and vegetables and how to prepare the food. There is so much great stuff you can do in a school garden and it's great to watch all of that. But they have to do all of that stuff outside of their regular teaching time because that does not meet the SBAC (Smarter Balanced Assessment Consortium) standards."

"I just think that needs to stop," he said. "We really need to get down to the root that teaching kids is teaching kids and that is not a standardized box that we put people in. It is how they learn best, meeting each kid where they are at. And that is the important thing of getting kids educated and moving on to be successful."

When asked about the shortage of programs geared towards special needs and gifted students in the District Rossetti responded, "So all of this comes down to how we finance education."

"The fact is the schools in Seattle and Bellevue are able to tax at a larger tax rate," he stated. "And basically accumulate more money through their levies than

us out here in the rural areas. So I think we need a fairer tax system to equalize the playing field so that schools in our rural communities are able to educate kids at the same level that kids in Seattle and Bellevue and other urban areas are receiving their education at. So that would fix all of these problems in my opinion."

### Creating smarter happier children

One step in protecting children at school is to discourage violence and bullying in the schools according to Rossetti. "We really need to be promoting everyday positive mental outlooks on life," he said. "I think that the biggest thing that we can do on a daily basis is remind kids how unique they are, that having a positive outlook is huge and keeping mental health in good condition. I think that those areas will decrease what we are seeing as the negative stuff going on in our societies."

"In Longview, what we are finding that is working well is that we focused our efforts into putting a mental health counselor in all the elementary schools," he

stated. "Because one of the things that I noticed when I came on board as a school board member is that we kind of do some mental health counseling up in the high school levels, even less in the middle schools and we had almost none in the elementary schools."

Rossetti went on to explain that in his opinion it is best to combat mental issues and behavioral problems early in a child's development. The idea is to give young children the help they need so that they do not have so many issues when they are older. That way society does not have to work so hard when the children are older.

Rossetti also explained that the state has worked on some mandates for curriculum in schools that focus on anti-bullying. Schools that have tested the programs have liked the results making the school a safer and better environment for children.

"The pet project that I have is figuring out a way to fully fund basic education at a state level," said Rossetti. "I think that is everyone's priority. I want to see us get out from underneath

our Supreme Court Order, Contempt Order, and fully fund basic education as a state."

He said, "I have some ways to do that, but I'm just a Freshman Legislator. I don't know if all my great ideas will pass in my first year. But that is definitely my priority."

Thank You  
"I'm honored for the privilege to serve otherwise I'm just excited to do my part in this next session," Rossetti said. "I want to make sure that my office doors are open for everybody. I'm accessible and I'm willing to be accessible to anyone who wants to reach out."

If you have any questions, comments, concerns for Representative JD Rossetti he is available by mail, phone and email.

Representative JD Rossetti  
334 John L. O'Brien Building  
PO Box 40600  
Olympia, WA 98504

Phone: 360-786-7806

Email:  
JD.Rossetti@leg.wa.gov

"They can come in to visit," he said. "I want to hear what people have to say."

## EMT Calls

Dec 20, 2015 - Jan 3, 2016  
Lewis County Fire District 2 (Toledo)  
Incidents - 33  
Basic Life Support Patient Transports - 11  
Advanced Life Support Patient Transports - 06  
Refusal Non Transport EMS - 11  
Fine Incident - 03  
Public Assist - 01  
Alarm system - 01  
Cancel - 00  
Cowditz Lewis Fire District 20 (Vader/Ryderwood)  
EMS Incidents - 08  
Basic Life Support Pa-

tient Transports - 03  
Advanced Life Support Patient Transports - 02  
Refusal Non Transport EMS - 03  
Cancel - 02

Lewis County Medic One (Toledo, Winlock, Vader, Ryderwood, Napavine, Onalaska, Sal-kum)

EMS Incidents - 63  
Basic Life Support Patient Transports - 15  
Advanced Life Support Patient Transports - 33  
Refusal Non Transport EMS - 16  
Cancel - 01

## Vader-Enchanted Valley Water System

Lewis County Public Works will host a meeting to discuss the proposed water system plan.

WHEN: Tuesday, January 19, 2016  
TIME: 6:00 P.M.  
WHERE: Vader City Hall, Vader, WA

If you have any specific questions regarding this meeting, please contact the Lewis County Public Works office at 740-2660.

## HomeTownDebate.com

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(360) 266-1112 sweenysace@live.com  
Mon - Fri 8:30am - 5:30pm, Sat 8:30am - 5:00pm, Sun 10:00am - 4:00pm

## RECYCLE YOUR CHRISTMAS TREES, HOLIDAY LIGHTS & STYROFOAM!

Dec. 26 thru. Jan. 10, 2016

10 a.m. to 4 p.m. Sun.-Fri. & 9 a.m. to 4 p.m. Sat.  
Lewis County Central Transfer Station  
1411 S. Tower Avenue, Centralia

Please...REMOVE ALL DECORATIONS & TINSEL

NO FLOCKED OR ARTIFICIAL TREES WILL BE ACCEPTED.

We reserve the right to refuse trees that do not comply. You may dispose of flocked, artificial or decoated trees at the transfer station where regular fees will be charged (\$10 minimum for 200 pounds or less). Wreaths must be free of ribbon, wire and decorations. No trees or wreaths from commercial operations will be accepted. Thank you for your cooperation.

Styrofoam must be clean, dry, free of all tape and labels.

Items that do not comply cannot be accepted.



Steps to Recycle Your Styrofoam:

1. Identify your Styrofoam
  - Look for the #6 Recycling Symbol of EPS inside the symbol.
  - If you are unsure, bend the material. It should break, and you will notice individual beads of Styrofoam.
2. Make sure Styrofoam is clean, dry and free of all tapes and labels. If not, please discard.
3. Place Styrofoam Recycling in clear bags.
  - Black or opaque bags cannot be accepted.
  - All colors of packing peanuts may be mixed, but all peanuts must be bagged separately (in clear bag) from Styrofoam pieces.

Yes/Accepted



Donations Gladly Accepted to Support:  
Master Gardener & Master Recycler Composter Programs

Anyone with questions may call 740-1451, 740-1212 or 1-800-749-5330.

This special recycling event is offered to you by the Lewis County Department of Public Works Solid Waste Utility, the WSU Lewis County Master Gardener volunteers and the WSU Lewis County Master Recycler Composter volunteers.



WASHINGTON STATE UNIVERSITY  
LEWIS COUNTY EXTENSION  
Master Gardener Program



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646 Spirit  
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Castle Rock,  
WA 98611

January 19, 2016

**Vader-Enchanted Valley Water System Plan Meeting**

**Notes from the Vader/Enchanted Valley Water System Plan Informational meeting held at Vader City Hall 1-19-16.**

*Meeting Started at 6:00 pm, adjourned at 6:45.*

Six members of the public (including 2 council members Andy Wilson and Judy Costello) attended.

Shirley Kook gave a comprehensive presentation about the proposed water system plan, and discussed the water use efficiency goals.

Judy Costello asked a question concerning the water rates and whether the Water System Plan would make the rates go up. – Tim Elsea explained that though the Water System Plan addressed the future need for additional revenue, the Plan in itself would not make the rates go up. That would be done through a Public Process in front of the Board of County Commissioners.

Judy expressed her sentiment that the County did a good job running the water system.



# VADER-ENCHANTED VALLEY WATER SYSTEM NEWSLETTER



Lewis County Public Works, 2025 NE Kresky Ave, Chehalis, WA 98532

Lewis County Fiscal Billing Office, Lewis County Courthouse, 351 NW North St, Chehalis, WA 98532

Office Hours: 8:30 AM - 4 PM, Monday - Friday

Web address: [www.lewiscountywa.gov/publicworks/utility-services](http://www.lewiscountywa.gov/publicworks/utility-services) or call 1-855-858-2843

## Flint Water Crisis...Can it Happen Here?

The water crisis in Flint, Michigan, highlighted several issues. One, the disastrous combination of poor management and bad decisions lead to the poisoning of the water supply (excuse the pun). Two, the regulatory measures taken to ensure this vital human need of safe potable water were missing. And three, safe and sufficient water is viewed by many of the American public as a human right.

The Flint crisis is one that drinking water regulators, administrators and operators work to avoid. Can it happen here? Lewis County and the State Department of Health are working diligently to ensure nothing like this ever happens in Vader.

Our State Department of Health (DOH) regulates our public water systems under state statutory authority to protect the health of consumers using public drinking water supplies. DOH takes this mission seriously. For example, DOH drafted a fact sheet about lead exposure in response to the Flint crisis, which is attached with this newsletter for your use.

Lewis County also share DOH's mission of protecting your health. We work to be in compliance with federal and state regulations, and manage the water system efficiently and responsibly as possible. We test for lead and copper every three years. The last test was conducted in September 2013. We use new lead-free water service meters and fittings.

Other local conditions that work in our favor are the quality of our raw water source, the lack of multiple upstream outfalls, somewhat newer water pipes and the close coordination of our work with DOH and Lewis County Health.

The crisis is terrible for the residents of Flint but it started a national conversation about the importance of ensuring that drinking water regulations are followed; listening to the users of the water system and being responsive to complaints; ensuring adequate training and accountability for staff, and being open and accountable not only to the users of the water system but to regulators as well

Erik D. Olson, head of the health and environment program at the National Resources Defense Council summarized it well: "You think our roads and bridges aren't being fixed? The stuff underground is just totally ignored. We're mostly living off the investment of our parents and grandparents for our drinking water supply."

We hope to allay your fears of whether a Flint crisis can happen here by giving you information. A short article on Flint's problems is on page 2 of this newsletter.

Lewis County takes serious our responsibility to provide safe and reliable drinking water to our customers, and it is our honor to be the stewards of your water system.

## Update on the New Reservoir

Our \$717,000 Community Development Block Grant (CDBG) from the State Department of Commerce contract was approved in December 2015. The funding is for a new reservoir.

We now are in the process of selecting an engineering consultant for design engineering and construction management support services. We hope to start design this summer and start construction next spring in 2017.

CODE RED HAS BEEN REPLACED BY  
LEWIS COUNTY ALERT! SEE  
ARTICLE ON NEXT PAGE AND  
DON'T FORGET TO SIGN UP!



### **QUARTERLY SCHEDULE SYSTEM FLUSHING:** *January-April-August-December*

*Quarterly flushes will be performed between the 1<sup>st</sup> and 10<sup>th</sup> of scheduled months.*

### **SUMMER ACTIVITY:**

*Valve Exercise and Isolation  
Valve Marking  
Vegetation Maintenance around facility*

## **The Flint Michigan Water Crisis**

As manufacturing jobs moved away from Flint and families escaped into the suburbs, Flint's tax base hollowed out. The Governor declared a state of financial emergency for Flint in 2011, when it faced \$15 million in debt. The state took budgetary control and the governor appointed an emergency manager to run the city. All decisions made about the water crisis were at the state level.

Switching water sources from Lake Huron to Flint River was intended to save money for the struggling industrial town of Flint, Michigan. The switch was supposed to be temporary until a new state-run supply line to Lake Huron was ready for connection. The switch was made in April 2014. The water started to look, smell and taste funny shortly after the switch. The contaminant was iron. The Flint River is highly corrosive, about 19 times more so than the Lake Huron supply. Yet the state Department of Environmental Quality was not treating the Flint River water with a corrosion inhibitor which was a violation of federal law. The water was eroding the iron water mains and turning the water brown.

About half of the service lines to homes in Flint are made of lead. Because the river water was not properly treated and highly corrosive, it leached lead into homes.

The City switched back to Detroit water in October 2015. Researchers still detect lead levels—lower levels—in water in Flint homes. The state is handing out filters and bottled water.

Lead poisoning is irreversible and the children who tested elevated levels will suffer lifelong consequences. It drops your IQ and affects behavior with multigenerational impacts. There are some environmental actions that can help mitigate exposure such as proper nutrition and early childhood education. That was difficult in Flint with inadequate resources.

## **CODE RED HAS BEEN REPLACED BY LEWIS COUNTY ALERT**

Recently, the old Code Red emergency alert system was replaced by Lewis County Alert.

If you received Code Red messages about water outages from us via cellphone, text, or email, you will need to sign up again with the Lewis County Alert system. If you currently have a landline phone, that number will be automatically called with the alert information.

In addition to the Vader/Enchanted Valley Water alerts you will also be notified of any emergency information that would impact you such as fires or other potential disasters. It is our goal to notify you as quickly as possible. Signing up for Lewis County Alert will help ensure that occurs.

Please refer to the website below for more information.

<http://lewiscountywa.gov/911/codered-changes-to-lewis-county-alert>



# VADER-ENCHANTED VALLEY WATER SYSTEM NEWSLETTER



Lewis County Public Works, 2025 NE Kresky Ave, Chehalis, WA 98532

Lewis County Fiscal Billing Office, Lewis County Courthouse, 351 NW North St, Chehalis, WA 98532

Office Hours: 8:30 AM - 4 PM, Monday - Friday

Web address: [www.lewiscountywa.gov/publicworks/utility-services](http://www.lewiscountywa.gov/publicworks/utility-services) or call 1-855-858-2843

## Is That Normal?

We are available Monday through Friday from 8:00 AM to 4:00 PM at 1-855-858-2843 to answer questions, resolve problems, receive comments (and kudos) and report leaks. After we understand your need, we can issue a work order to investigate or take measures to correct the situation. Our response time will depend upon the nature of the problem, but we will follow up with customers as needed. Comments and kudos are also welcome.

We are always looking for leaks and other unaccounted water usages. If you see a dip in the roadway, water flowing out of the ground, slumping ground, or isolated green patch of vegetation amidst dry vegetation, it may indicate a water main break. If you see something like this, please call and let us know.

### FREE DRAWING

All customers who remit payment of the October 2015 invoice by November 5, 2015 are eligible for a drawing of an outdoor water saver kit.

## Coming Soon to Your Neighborhood...a New Water Reservoir!

Good news everyone. We heard on August 27 that our grant application for a new water reservoir was approved! The funding is a \$717,000 Community Development Block Grant (CDBG) from the State Department of Commerce.

The project is a new water reservoir at our water plant. Our existing 250,000-gallon water reservoir was built in 1979. Distribution system problems and deferred maintenance have made problems for our existing tank. A comprehensive inspection of the tank interior and exterior in 2013 showed a need for recoating. The main advantage of this project is that we will have a two-tank water system which gives us operational flexibility and additional capacity. Our existing tank will eventually have to be recoated but another tank will enable uninterrupted water service.

We will start as soon as the grant contract is approved. We hope to get started on the preliminary design this winter.

## DROUGHT AND WINTER WISHES

With the shorter days and cooler weather of autumn, the summer drought and heat may recede in our memories of just another "hot summer". However, drought conditions can still linger especially in the Pacific Northwest where many public water systems rely on a heavy snowpack for their water supply. Our water supply is from the Cowlitz River which is fed from snowmelt from the east side of Mt Rainier and surrounding mountains.

Heavy winter rains are not enough to build up a heavy snowpack. We need snow in the mountains with cool temperatures in the spring. The cooler temperatures in the spring will control and regulate the release of meltwaters throughout the summer. A heavy snowpack is our reservoir and we need lots of it.

Although it is still water, the density of snow is different from precipitation. This is further complicated by the type of snow: wet or dry. Dry snow is very light, has very little liquid content and lots of air pockets in the snowflake. Dry snow is not "sticky" making it difficult to make snowballs and is easily blown about by the wind. The ideal snow is wet snow falling at freezing or below ground temperatures. The "average" snow to liquid ratio is 10:1. This is saying if 10 inches of wet snow was melted, it would make about 1 inch of rain.

It is still too early to tell if we should anticipate another drought, but we encourage you to practice water conservation. I know. A water utility telling their customers to practice water conservation seems counterproductive, because water sales pay for water utility operations. However, it is our goal to improve production and operational efficiencies to provide safe potable water. Although less water usage means decreased water sales, it also results in lower production costs.

It benefits us all to practice water conservation.

What do I want this year? Whirled peas. Oops make that world peace and a heavy snowpack!

by Lady Clearwater

## WATER USE EFFICIENCY GOAL

The water system plan (WSP) has been prepared and will be submitted to Department of Health (DOH) for review this year. The WSP is a planning document that is required to be updated every six years or more frequently to reflect current conditions of the water system. The previous one was prepared for the City of Vader and dated May 2008.

Another reason besides regulatory compliance is because we have been managing your water system since October 30, 2010 and ownership was transferred to Lewis County as of April 30, 2014. We have operational goals and organizational structures that are different than the City. This information has to be outlined in the WSP. Our WSP will also outline our management, cross-connection control, water conservation, capital improvement and water use efficiency programs.

One requirement of our water use efficiency program is to establish a water use efficiency goal. The water system had a water loss exceeding 50% when we started management of the system in October 2010. The loss rate was reduced to 19% for 2014 with a three-year average (2012-2014) of 37%. We are asked to report annual and three-year average water loss values to DOH every year.

We would like to continue lowering our water losses and have set a water use efficiency goal to: ***"reduce distribution system leakage to less than 20% of total production by 2034 as calculated on a rolling three-year average"***. This also translates to an annual water loss rate of 10% or less.

We would like to hear from you, our customer, about what you think of the proposed water use efficiency goal. Please email or call us at our toll-free utility number.

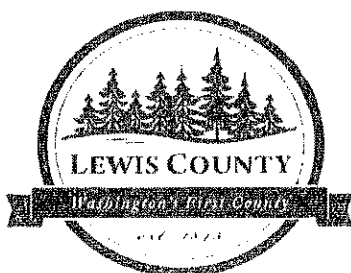
We will be holding a public hearing about your WSP which is another opportunity to let us know about the proposed goal. The public hearing date is tentatively set for this year and details will be announced in the Lewis County WebSite.

### New Look, Same Service

Starting this month, your water bill will have a new look. When we started managing the system in October 2010, we inherited the billing software system that was used by the City of Vader. Technical updates and support services by the vendor were discontinued in 2012 so we changed to a new billing system. It was our hope to have it in use last August, but the creation, transfer of data, training and testing took longer than expected.

The change to the new billing software will also simplify our billing process. We can use standard sized paper and envelopes thus forgoing the cost of special stationery. We also can run reports readily without using intermediate steps such as exporting data into a spreadsheet.

If you need help to understand your new utility bill, we are here at 1-855-858-2843.



#### **Vader-Enchanted Valley Water System**

Historic Courthouse, RM 030  
351 NW North Street  
Chehalis, WA 98532

**VADER-ENCHANTED VALLEY WATER BILL**